Docket No.: 50179-087 **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	
Robyn Joyce RUSSELL, et al.	:	
Serial No.: (Divisional of Serial No. 09/068,960)	:	Group Art Unit:
Filed: February 06, 2001	:	Examiner:

For: MALATHION CARBOXYLESTERASE

TRANSMITTAL OF FORMAL DRAWINGS

Commissioner for Patents
Washington, DC 20231

Sir:

Sixteen (16) sheets of formal drawings are submitted herewith as filed in parent application Serial No. 09/068,960.

Respectfully submitted,

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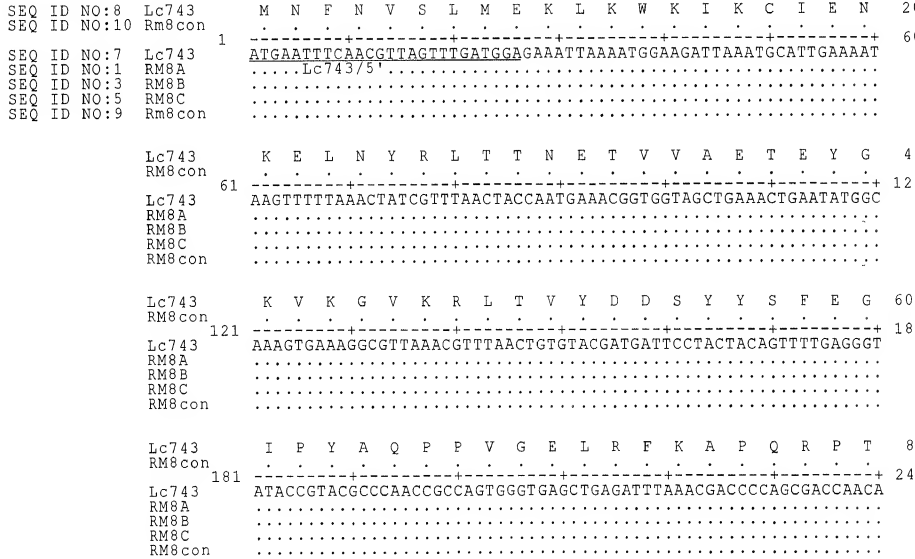
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SEQ ID NO:10 Rm8con . . . . . .
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SEQ ID NO:7 Lc743 ATGAATTTCAACGTTAGTTTGATGGAGAAATTAAAATGGAAGATTAAATGCATTGAAAAT
SEQ ID NO:1 RM8A .....Lc743/5'.....
SEQ ID NO:3 RM8B .....
SEQ ID NO:5 RM8C .....
SEQ ID NO:9 Rm8con .....
Lc743 K E L N Y R L T T N E T V V A E T E Y G 40
RM8con . . . . . .
61 ---------+---------+---------+---------+---------+---------+ 120
Lc743 AAGTTTTTAAACTATCGTTTAACTACCAATGAAACGGTGGTAGCTGAAACTGAATATGGC
RM8A .....
RM8B .....
RM8C .....
RM8con .....
Lc743 K V K G V K R L T V Y D D S Y Y S F E G 60
RM8con . . . . . .
121 ---------+---------+---------+---------+---------+---------+ 180
Lc743 AAAGTGAAAGGCGTTAAACGTTTAACTGTGTACGATGATTCCTACTACAGTTTTGAGGGT
RM8A .....
RM8B .....
RM8C .....
RM8con .....
Lc743 I P Y A Q P P V G E L R F K A P Q R P T 80
RM8con . . . . . .
181 ---------+---------+---------+---------+---------+---------+ 240
Lc743 ATACCGTACGCCCAACCGCCAGTGGGTGAGCTGAGATTTAAACGACCCCAGCGACCAACA
RM8A .....
RM8B .....
RM8C .....
RM8con .....

FIG. 1A

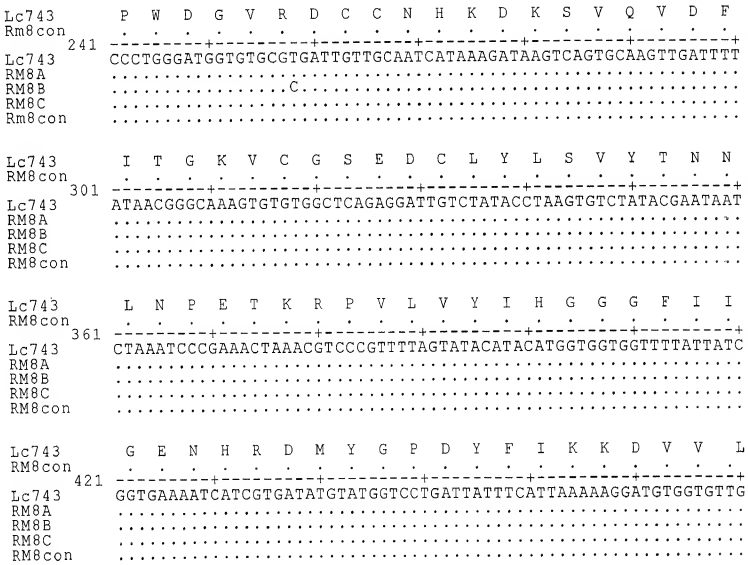
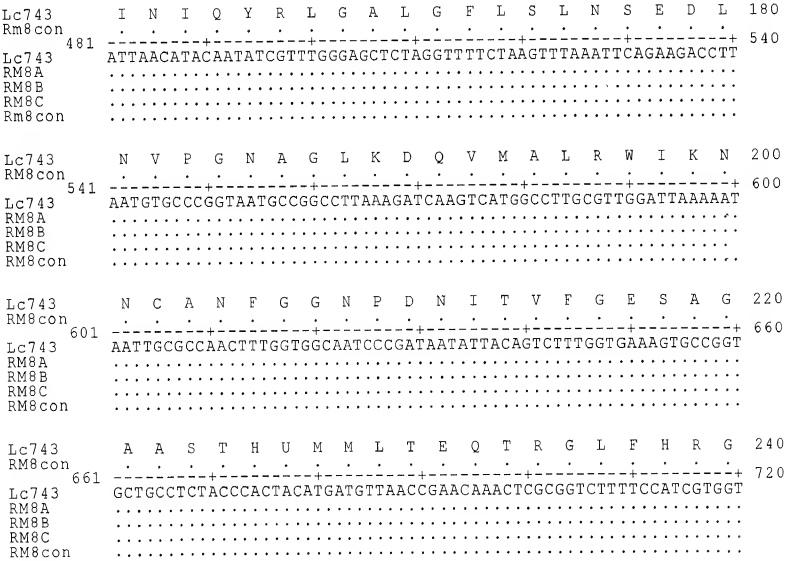

Lc743 P W D G V R D C C N H K D K S V Q V D F 100
Rm8con
241 300
Lc743 CCCTGGGATGGTGTGCGTGATTGTTGCAATCATAAAGATAAGTCAGTGCAAGTTGATTTT
RM8A
RM8B C
RM8C
Rm8con
Lc743 I T G K V C G S E D C L Y L S V Y T N N 120
RM8con
301 360
Lc743 ATAACGGGCAAAGTGTGTGGCTCAGAGGATTGTCTATACCTAAGTGTCTATACGAATAAT
RM8A
RM8B
RM8C
RM8con
Lc743 L N P E T K R P V L V Y I H G G G F I I 140
RM8con
361 420
Lc743 CTAAATCCCGAAACTAAACGTCCCGTTTTAGTATACATACATGGTGGTGGTTTTATTATC
RM8A
RM8B
RM8C
RM8con
Lc743 G E N H R D M Y G P D Y F I K K D V V L 160
RM8con
421 480
Lc743 GGTGAAAATCATCGTGATATGTATGGTCCTGATTATTTCATTAAAAAGGATGTGGTGTTG
RM8A
RM8B
RM8C
RM8con

FIG. 1B


Lc743 I N I Q Y R L G A L G F L S L N S E D L 180
Rm8con
481 540
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RM8A
RM8B
RM8C
Rm8con
Lc743 N V P G N A G L K D Q V M A L R W I K N 200
RM8con
541 600
Lc743 AATGTGCCCGGTAATGCCGGCCTTAAAGATCAAGTCATGGCCTTGCGTTGGATTAAAAAT
RM8A
RM8B
RM8C
RM8con
Lc743 N C A N F G G N P D N I T V F G E S A G 220
RM8con
601 660
Lc743 AATTGCGCCAACTTTGGTGGCAATCCCGATAATATTACAGTCTTTGGTGAAAGTGCCGGT
RM8A
RM8B
RM8C
RM8con
Lc743 A A S T H U M M L T E Q T R G L F H R G 240
RM8con
661 720
Lc743 GCTGCCTCTACCCACTACATGATGTTAACCGAACAAACTCGCGGTCTTTTCCATCGTGGT
RM8A
RM8B
RM8C
RM8con

FIG. 1C

```
Lc743          I  L  M  S  G  N  A  I  C  P  W  A  N  T  Q  C  Q  H  R  A   260
Rm8con         .  .  .  .  .  .  .  .  .  .  L  .  .  .  .  .  .  .  .  .
           721 ---------+---------+---------+---------+---------+---------+ 780
Lc743         ATACTAATGTCGGGTAATGCTATTTGTCCATGGGCTAATACCCAATGTCAACATCGTGCC
RM8A          ...............................T............................
RM8B          ...............................T............................
RM8C          ...............................T............................
Rm8con        ...............................T............................

Lc743          F  T  L  A  K  L  A  G  Y  K  G  E  D  N  D  K  D  V  L  E   280
RM8con         .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
           781 ---------+---------+---------+---------+---------+---------+ 840
Lc743         TTCACCTTAGCCAAATTGGCCGGCTATAAGGGTGAGGATAATGATAAGGATGTTTTGGAA
RM8A          ............................................................
RM8B          ............................................................
RM8C          ....................................A.......................
RM8con        ............................................................

Lc743          F  L  M  K  A  K  P  Q  D  L  I  K  L  E  E  K  V  L  T  L   300
RM8con         .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
           841 ---------+---------+---------+---------+---------+---------+ 900
Lc743         TTTCTTATGAAAGCCAAGCCACAGGATTTAATAAAACTTGAGGAAAAAGTTTTAACTCTA
RM8A          ............................................................
RM8B          ............................................................
RM8C          ..............................G.............................
RM8con        ............................................................

Lc743          E  E  R  T  N  K  V  M  F  P  F  G  P  T  V  E  P  Y  Q  T   320
RM8con         .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
           901 ---------+---------+---------+---------+---------+---------+ 960
Lc743         GAAGAGCGTACAAATAAGGTCATGTTTCCTTTTGGTCCCACTGTTGAGCCATATCAGACC
RM8A          ............................................................
RM8B          ............................................................
RM8C          ............................................................
RM8con        ............................................................
```

FIG. 1D

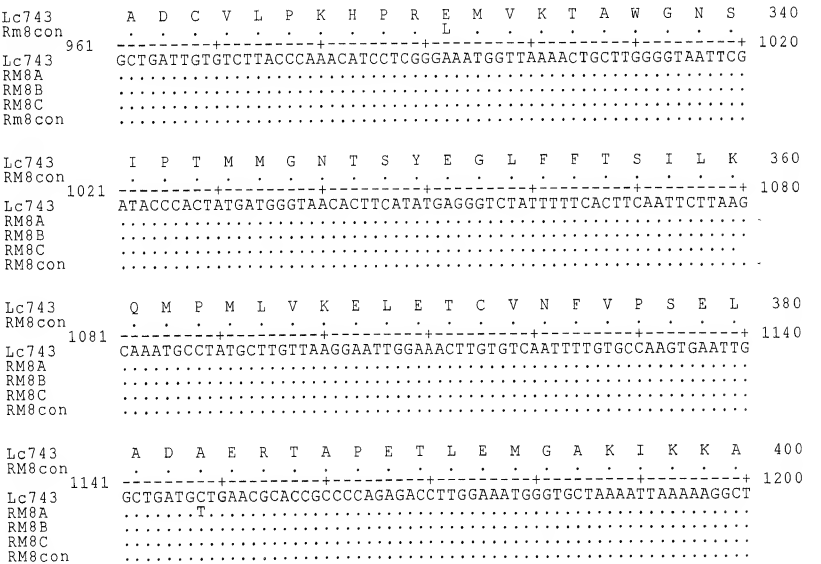

Lc743 A D C V L P K H P R E M V K T A W G N S 340
Rm8con . . . . . L . . . . . .
961 + + + + + + 1020
Lc743 GCTGATTGTGTCTTACCCAAACATCCTCGGGAAATGGTTAAAACTGCTTGGGGTAATTCG
RM8A
RM8B
RM8C
Rm8con
Lc743 I P T M M G N T S Y E G L F F T S I L K 360
RM8con
1021 + + + + + + 1080
Lc743 ATACCCACTATGATGGGTAACACTTCATATGAGGGTCTATTTTTCACTTCAATTCTTAAG
RM8A
RM8B
RM8C
RM8con
Lc743 Q M P M L V K E L E T C V N F V P S E L 380
RM8con
1081 + + + + + + 1140
Lc743 CAAATGCCTATGCTTGTTAAGGAATTGGAAACTTGTGTCAATTTTGTGCCAAGTGAATTG
RM8A
RM8B
RM8C
RM8con
Lc743 A D A E R T A P E T L E M G A K I K K A 400
RM8con
1141 + + + + + + 1200
Lc743 GCTGATGCTGAACGCACCGCCCCAGAGACCTTGGAAATGGGTGCTAAAATTAAAAAGGCT
RM8A .....T.....
RM8B
RM8C
RM8con

FIG. 1E

```
Lc743       H  V  T  G  E  T  P  T  A  D  N  F  M  D  L  C  S  H  I  Y     420
Rm8con      .  .  .  .  .  .  .  .  .  .  L  .  .  .  .  .  .  .  .  .
       1201 ---------+---------+---------+---------+---------+---------+ 1260
Lc743       CATGTTACAGGAGAAACACCAACAGCTGATAATTTTATGGATCTTTGCTCTCACATCTAT
RM8A        ............................................................
RM8B        ............................................................
RM8C        ............................................................
Rm8con      ............................................................

Lc743       F  W  F  P  M  H  R  L  L  Q  L  R  F  N  H  T  S  G  T  P     440
RM8con      .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
       1261 ---------+---------+---------+---------+---------+---------+ 1320
Lc743       TTCTGGTTCCCCATGCATCGTTTGTTGCAATTACGTTTCAATCACACCTCCGGTACACCC
RM8A        ............................................................
RM8B        ............................................................
RM8C        ............................................................
RM8con      ............................................................

Lc743       V  Y  L  Y  R  F  D  F  D  S  E  D  L  I  N  P  Y  R  I  M     460
RM8con      .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
       1321 ---------+---------+---------+---------+---------+---------+ 1380
Lc743       GTCTACTTGTATCGCTTCGACTTTGATTCGGAAGATCTTATTAATCCCTATCGTATTATG
RM8A        .......................C.................C..................
RM8B        .......................C.................C..................
RM8C        .......................C.................C..................
RM8con      .......................C.................C..................

Lc743       R  S  G  R  G  V  K  G  V  S  H  A  D  E  L  T  Y  F  F  W     480
RM8con      .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
       1381 ---------+---------+---------+---------+---------+---------+ 1440
Lc743       CGTAGTGGACGTGGTGTTAAGGGTGTTAGTCATGCTGATGAATTAACCTATTTCTTCTGG
RM8A        ............................................................
RM8B        ............................................................
RM8C        ............................................................
RM8con      ............................................................
```

FIG. 1F

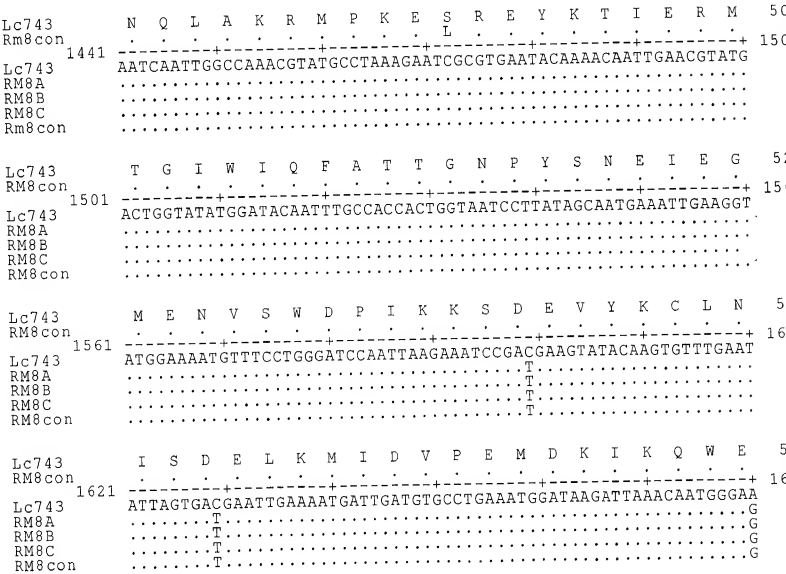

Lc743 N Q L A K R M P K E S R E Y K T I E R M 500
Rm8con . . . . . L 1500
1441
Lc743 AATCAATTGGCCAAACGTATGCCTAAAGAATCGCGTGAATACAAAACAATTGAACGTATG
RM8A
RM8B
RM8C
Rm8con
Lc743 T G I W I Q F A T T G N P Y S N E I E G 520
RM8con 1560
1501
Lc743 ACTGGTATATGGATACAATTTGCCACCACTGGTAATCCTTATAGCAATGAAATTGAAGGT
RM8A
RM8B
RM8C
RM8con
Lc743 M E N V S W D P I K K S D E V Y K C L N 540
RM8con 1620
1561
Lc743 ATGGAAAATGTTTCCTGGGATCCAATTAAGAAATCCGACGAAGTATACAAGTGTTTGAAT
RM8A T
RM8B T
RM8C T
RM8con T
Lc743 I S D E L K M I D V P E M D K I K Q W E 560
RM8con 1680
1621
Lc743 ATTAGTGACGAATTGAAAATGATTGATGTGCCTGAAATGGATAAGATTAAACAATGGGAA G
RM8A T G
RM8B T G
RM8C T G
RM8con T

FIG. 1G

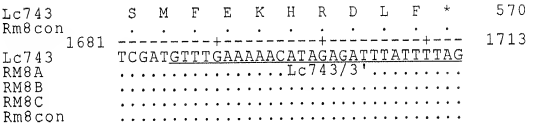

Lc743 S M F E K H R D L F * 570
Rm8con
1681 1713
Lc743 TCGATGTTTGAAAAACATAGAGATTTATTTTAG
RM8A Lc743/3'
RM8B
RM8C
Rm8con

FIG. 1H

```
SEQ ID NO:13 MdαE7   1  MTFLKQFIFRLKLCVKCMVNKYTNYRLSTNETQIIDTEYGQIKGVKRMTV  50
                         |.|    :: :||: :||: ||: ||||.|||| : :||||.:||||||:||
SEQ ID NO:8  LcαE7   1  MNFNVSLMEKLKWKIKCIENKFLNYRLTTNETVVAETEYGKVKGVKRLTV  50
                                 .         .         .         .         .
                     51  YDDSYYSFESIPYAKPPVGELRFKAPQUPVPWEGVRDCCGPANRSVQTDF 100
                         |||||||||:||||.||||||||||||||.||:||||||..  ::|||.||
                     51  YDDSYYSFEGIPYAQPPVGELRFKAPQRPTPWDGVRDCCNHKDKSVQVDF 100
                                 .         .         .         .         .
                    101  ISGKPTGSEDCLYLNVYTNDLNPDKRRPVMVFIHGGDFIFGEANRNWFGP 150
                         |.||..||||||||.||||:|||:.:|||:|:||||:||:||.:|: :||
                    101  ITGKVCGSEDCLYLSVYTNNLNPETKRPVLVYIHGGGFIIGENHRDMYGP 150
                                 .         .         .         .         .
                    151  DYFMKKPVVLVTVQYRLGVLGFLSLKSENLNVPGNAGLKDQVMALRWVKS 200
                         |||:||.|||:.:|||||.||||||.||:||||||||||||||||||:|.
                    151  DYFIKKDVVLINIQYRLGALGFLSLNSEDLNVPGNAGLKDQVMALRWIKN 200
                                 .         .         .         .         .
                    201  NIAIFGGDVDNITVFGESAGGASTHYMMITEQTRGLFHRGIMMSGNSMCS 250
                         |.|  |||:.|||||||||||:||||||||:||||||||||||:||||.:|.
                    201  NCANFGGNPDNITVFGESAGAASTHYMMLTEQTRGLFHRGILMSGNAICP 250
                         ▼       .         .         .         .         .
                    251  WASTECQSRALTMAKRVGYKGEDNEKDILEFLMKANPYDLIKEEPQVLTP 300
                         ||.|:||  ||:|:||  .|||||||:||:|||||||.|  ||||  |..|||
                    251  WANTQCQHRAFTLAKLAGYKGEDNDKDVLEFLMKAKPQDLIKLEEKVLTL 300
                                 .         .         .         .         .
                    301  ERMQNKVMFPFGPTVEPYQTADCVVPKPIREMVKSAWGNSIPTLIGNTSY 350
                         | . |||||||||||||||||||:||.  |||||.||||||||::|||||
                    301  EERTNKVMFPFGPTVEPYQTAKCVLPKHPREMVKTAWGNSIPTMMGNTSY 350
                                 .         .         .         .         .
                    351  EGLLSKSVAKQYPEVVKELESCVNYVPWELADSERSAPETLERAAIVKKA 400
                         |||:  .|:  ||  |  :|||||.|||:||.||||.||.||||||.:|  :|||
                    351  EGLFFTSILKQMPMLVKELETCVNFVPSELADAERTAPETLEMGAKIKKA 400
                                 .         .         .         .         .
```

FIG. 2A

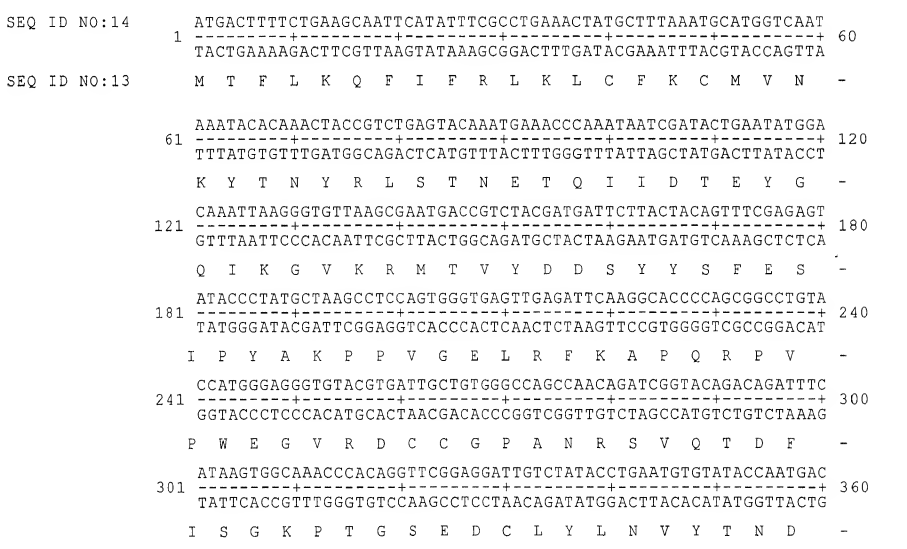
```
401  HVDGETPTLDNFMELCSYFYFLFPMHRFLQLRFNHTAGTPIYLYRFDFDS 450
     ||.|||||  ||||:|||.:||:||||||:||||||||.|||:||||||||||
401  HVTGETPTADNFMDLCSHIYFWFPMHRLLQLRFNHTSGTPVYLYRFDFDS 450

451  EEIINPYRIMRFGRGVKGVSHADELTYLFWNILSKRLPKESREYKTIERM 500
     |::|||||||| ||||||||||||||||:||| |.||:||||||||||||
451  EDLINPYRIMRSGRGVKGVSHADELTYFFWNQLAKRMPKESREYKTIERM 500

501  VGIWTEFATTGKPYSNDIAGMENLTWDPIKKSDDVYKCLNIGDELKVMDS 550
     .|||.:|||||.||||:|.|||||.|||||||:|||||||:||||::|:
501  TGIWIQFATTGNPYSNEIEGMENVSWDPIKKSDEVYKCLNISDELKMIDV 550

551  PEMDKIKQGASIFDKKKELF 570
     |||||||| .|:|:|.::||
551  PEMDKIKQWESMFEKHRDLF 570
```

FIG. 2B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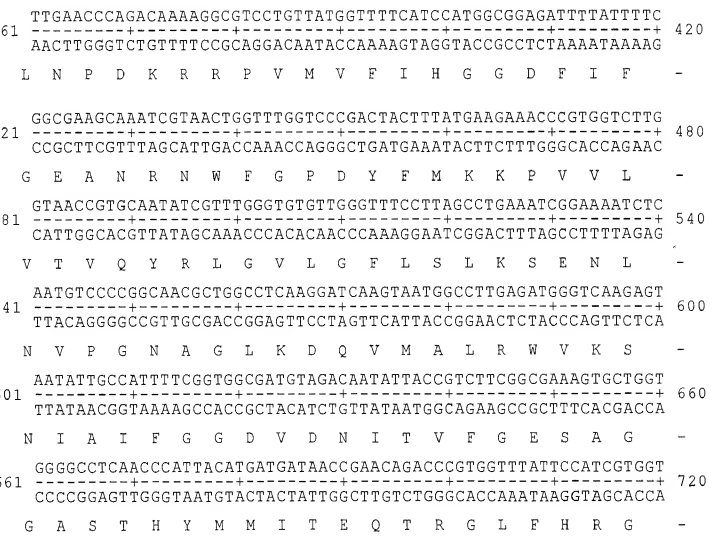
SEQ ID NO:13
M T F L K Q F I F R L K L C F K C M V N -
AAATACACAAACTACCGTCTGAGTACAAATGAAACCCAAATAATCGATACTGAATATGGA
TTTATGTGTTTGATGGCAGACTCATGTTTACTTTGGGTTTATTAGCTATGACTTATACCT
K Y T N Y R L S T N E T Q I I D T E Y G -
CAAATTAAGGGTGTTAAGCGAATGACCGTCTACGATGATTCTTACTACAGTTTCGAGAGT
GTTTAATTCCCACAATTCGCTTACTGGCAGATGCTACTAAGAATGATGTCAAAGCTCTCA
Q I K G V K R M T V Y D D S Y Y S F E S -
ATACCCTATGCTAAGCCTCCAGTGGGTGAGTTGAGATTCAAGGCACCCCAGCGGCCTGTA
TATGGGATACGATTCGGAGGTCACCCACTCAACTCTAAGTTCCGTGGGGTCGCCGGACAT
I P Y A K P P V G E L R F K A P Q R P V -
CCATGGGAGGGTGTACGTGATTGCTGTGGGCCAGCCAACAGATCGGTACAGACAGATTTC
GGTACCCTCCCACATGCACTAACGACACCCGGTCGGTTGTCTAGCCATGTCTGTCTAAAG
P W E G V R D C C G P A N R S V Q T D F -
ATAAGTGGCAAACCCACAGGTTCGGAGGATTGTCTATACCTGAATGTGTATACCAATGAC
TATTCACCGTTTGGGTGTCCAAGCCTCCTAACAGATATGGACTTACACATATGGTTACTG
I S G K P T G S E D C L Y L N V Y T N D -

FIG. 3A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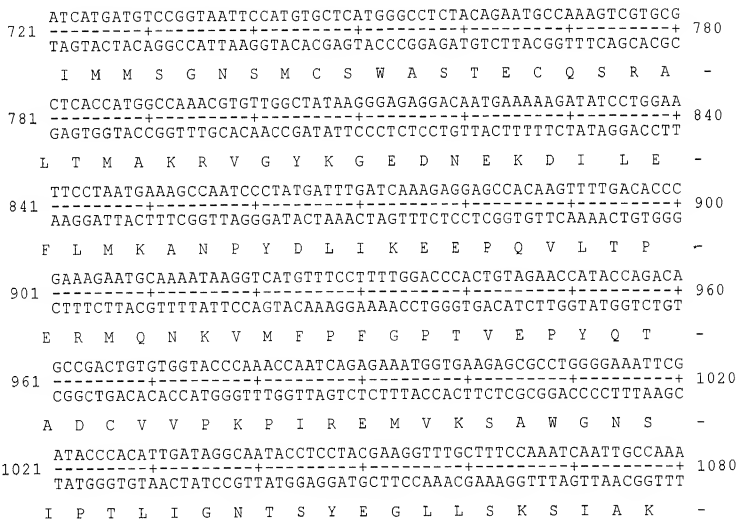
L N P D K R R P V M V F I H G G D F I F -
GGCGAAGCAAATCGTAACTGGTTTGGTCCCGACTACTTTATGAAGAAACCCGTGGTCTTG
CCGCTTCGTTTAGCATTGACCAAACCAGGGCTGATGAAATACTTCTTTGGGCACCAGAAC
G E A N R N W F G P D Y F M K K P V V L -
GTAACCGTGCAATATCGTTTGGGTGTGTTGGGTTTCCTTAGCCTGAAATCGGAAAATCTC
CATTGGCACGTTATAGCAAACCCACACAACCCAAAGGAATCGGACTTTAGCCTTTTAGAG
V T V Q Y R L G V L G F L S L K S E N L -
AATGTCCCCGGCAACGCTGGCCTCAAGGATCAAGTAATGGCCTTGAGATGGGTCAAGAGT
TTACAGGGGCCGTTGCGACCGGAGTTCCTAGTTCATTACCGGAACTCTACCCAGTTCTCA
N V P G N A G L K D Q V M A L R W V K S -
AATATTGCCATTTTCGGTGGCGATGTAGACAATATTACCGTCTTCGGCGAAAGTGCTGGT
TTATAACGGTAAAAGCCACCGCTACATCTGTTATAATGGCAGAAGCCGCTTTCACGACCA
N I A I F G G D V D N I T V F G E S A G -
GGGGCCTCAACCCATTACATGATGATAACCGAACAGACCCGTGGTTTATTCCATCGTGGT
CCCCGGAGTTGGGTAATGTACTACTATTGGCTTGTCTGGGCACCAAATAAGGTAGCACCA
G A S T H Y M M I T E Q T R G L F H R G -
361
421
481
541
601
661
420
480
540
600
660
720

FIG. 3B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I M M S G N S M C S W A S T E C Q S R A -
781 CTCACCATGGCCAAACGTGTTGGCTATAAGGGAGAGGACAATGAAAAAGATATCCTGGAA
GAGTGGTACCGGTTTGCACAACCGATATTCCCTCTCCTGTTACTTTTTCTATAGGACCTT 840
L T M A K R V G Y K G E D N E K D I L E -
841 TTCCTAATGAAAGCCAATCCCTATGATTTGATCAAAGAGGAGCCACAAGTTTTGACACCC
AAGGATTACTTTCGGTTAGGGATACTAAACTAGTTTCTCCTCGGTGTTCAAAACTGTGGG 900
F L M K A N P Y D L I K E E P Q V L T P -
901 GAAAGAATGCAAAATAAGGTCATGTTTCCTTTTGGACCCACTGTAGAACCATACCAGACA
CTTTCTTACGTTTTATTCCAGTACAAAGGAAAACCTGGGTGACATCTTGGTATGGTCTGT 960
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961 GCCGACTGTGTGGTACCCAAACCAATCAGAGAAATGGTGAAGAGCGCCTGGGGAAATTCG
CGGCTGACACACCATGGGTTTGGTTAGTCTCTTTACCACTTCTCGCGGACCCCTTTAAGC 1020
A D C V V P K P I R E M V K S A W G N S -
1021 ATACCCACATTGATAGGCAATACCTCCTACGAAGGTTTGCTTTCCAAATCAATTGCCAAA
TATGGGTGTAACTATCCGTTATGGAGGATGCTTCCAAACGAAAGGTTTAGTTAACGGTTT 1080
I P T L I G N T S Y E G L L S K S I A K -

FIG. 3C

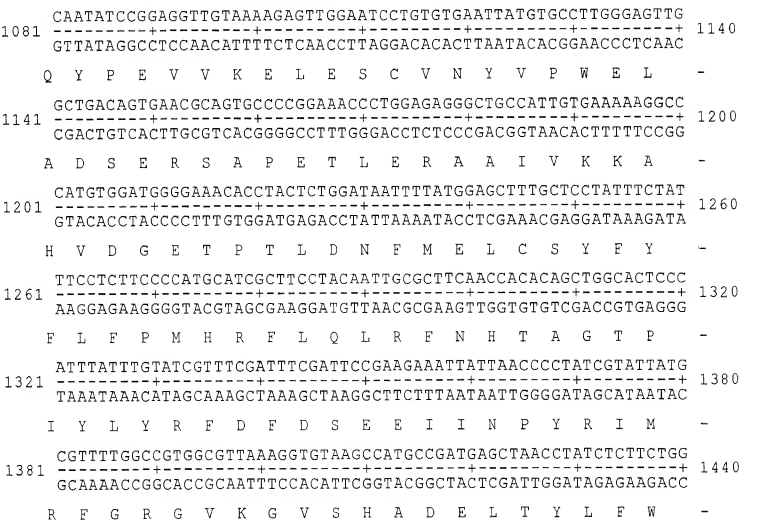
1081 CAATATCCGGAGGTTGTAAAAGAGTTGGAATCCTGTGTGAATTATGTGCCTTGGGAGTTG
GTTATAGGCCTCCAACATTTTCTCAACCTTAGGACACACTTAATACACGGAACCCTCAAC 1140
Q Y P E V V K E L E S C V N Y V P W E L -
1141 GCTGACAGTGAACGCAGTGCCCCGGAAACCCTGGAGAGGGCTGCCATTGTGAAAAAGGCC
CGACTGTCACTTGCGTCACGGGGCCTTTGGGACCTCTCCCGACGGTAACACTTTTTCCGG 1200
A D S E R S A P E T L E R A A I V K K A -
1201 CATGTGGATGGGGAAACACCTACTCTGGATAATTTTATGGAGCTTTGCTCCTATTTCTAT
GTACACCTACCCCTTTGTGGATGAGACCTATTAAAATACCTCGAAACGAGGATAAAGATA 1260
H V D G E T P T L D N F M E L C S Y F Y -
1261 TTCCTCTTCCCCATGCATCGCTTCCTACAATTGCGCTTCAACCACACAGCTGGCACTCCC
AAGGAGAAGGGGTACGTAGCGAAGGATGTTAACGCGAAGTTGGTGTGTCGACCGTGAGGG 1320
F L F P M H R F L Q L R F N H T A G T P -
1321 ATTTATTTGTATCGTTTCGATTTCGATTCCGAAGAAATTATTAACCCCTATCGTATTATG
TAAATAAACATAGCAAAGCTAAAGCTAAGGCTTCTTTAATAATTGGGGATAGCATAATAC 1380
I Y L Y R F D F D S E E I I N P Y R I M -
1381 CGTTTTGGCCGTGGCGTTAAAGGTGTAAGCCATGCCGATGAGCTAACCTATCTCTTCTGG
GCAAAACCGGCACCGCAATTTCCACATTCGGTACGGCTACTCGATTGGATAGAGAAGACC 1440
R F G R G V K G V S H A D E L T Y L F W -

FIG. 3D

```
      AACATTTTGTCGAAACGCCTGCCAAAGGAAAGCCGCGAATACAAAACCATTGAACGCATG
1441  ---------+---------+---------+---------+---------+---------+ 1500
      TTGTAAAACAGCTTTGCGGACGGTTTCCTTTCGGCGCTTATGTTTTGGTAACTTGCGTAC

     N  I  L  S  K  R  L  P  K  E  S  R  E  Y  K  T  I  E  R  M   -

      GTTGGCATTTGGACGGAATTCGCCACCACCGGCAAACCATACAGCAATGATATAGCCGGC
1501  ---------+---------+---------+---------+---------+---------+ 1560
      CAACCGTAAACCTGCCTTAAGCGGTGGTGGCCGTTTGGTATGTCGTTACTATATCGGCCG

     V  G  I  W  T  E  F  A  T  T  G  K  P  Y  S  N  D  I  A  G   -

      ATGGAAAACCTCACCTGGGATCCCATAAAAAAATCCGATGATGTCTATAAATGTTTAAAT
1561  ---------+---------+---------+---------+---------+---------+ 1620
      TACCTTTTGGAGTGGACCCTAGGGTATTTTTTTAGGCTACTACAGATATTTACAAATTTA

     M  E  N  L  T  W  D  P  I  K  K  S  D  D  V  Y  K  C  L  N   -

      ATCGGCGATGAATTGAAAGTTATGGATTTGCCAGAAATGGATAAAATTAAACAATGGGCA
1621  ---------+---------+---------+---------+---------+---------+ 1680
      TAGCCGCTACTTAACTTTCAATACCTAAACGGTCTTTACCTATTTTAATTTGTTACCCGT

     I  G  D  E  L  K  V  M  D  L  P  E  M  D  K  I  K  Q  W  A   -

      AGTATATTCGATAAAAAGAAGGAATTGTTT
1681  ---------+---------+---------+ 1710
      TCATATAAGCTATTTTTCTTCCTTAACAAA

     S  I  F  D  K  K  K  E  L  F
```

FIG. 3E

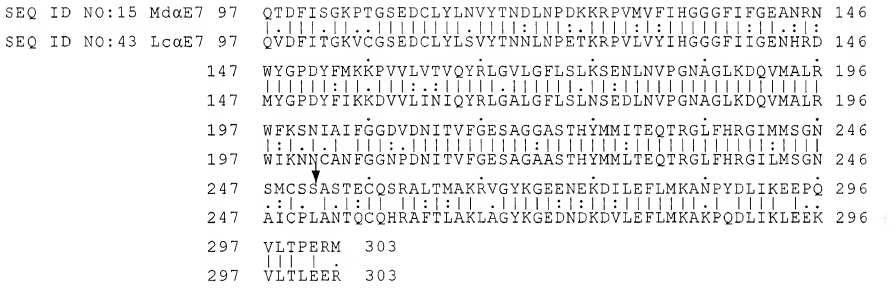
SEQ ID NO:15 MdαE7 97 QTDFISGKPTGSEDCLYLNVYTNDLNPDKKRPVMVFIHGGGFIFGEANRN 146
SEQ ID NO:43 LcαE7 97 QVDFITGKVCGSEDCLYLSVYTNNLNPETKRPVLVYIHGGGFIIGENHRD 146
147 WYGPDYFMKKPVVLVTVQYRLGVLGFLSLKSENLNVPGNAGLKDQVMALR 196
147 MYGPDYFIKKDVVLINIQYRLGALGFLSLNSEDLNVPGNAGLKDQVMALR 196
197 WFKSNIAIFGGDVDNITVFGESAGGASTHYMMITEQTRGLFHRGIMMSGN 246
197 WIKNNCANFGGNPDNITVFGESAGAASTHYMMLTEQTRGLFHRGILMSGN 246
247 SMCSSASTECQSRALTMAKRVGYKGEENEKDILEFLMKANPYDLIKEEPQ 296
247 AICPLANTQCQHRAFTLAKLAGYKGEDNDKDVLEFLMKAKPQDLIKLEEK 296
297 VLTPERM 303
297 VLTLEER 303

FIG. 4